Travis Zhang

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Looking for software roles that place an emphasis on teamwork and are challenging to complete

EDUCATION

Cornell University, **College of Engineering,** Ithaca, NY — Sep 2020 – May 2024
- Bachelor of Science in Computer Science
- **Relevant Courses:** Multivariable Calculus, Discrete Structures, OOP and Data Structures, Introduction to Machine Learning

Hamilton High School, Chandler, AZ — July 2016 – May 2020
- **Weighted GPA**: 4.927/5.0, **Unweighted GPA**: 4.0/4.0
- **Relevant Courses:** Multivariable Calculus, Differential Equations, Linear Algebra, AP Java, AP Physics C: Mechanics and E & M
- **Honors:** Steve Sanghi Scholarship Award, Andy Grove Intel Scholarship, Impact Scholarship, National Honor Society Semifinalist Scholarship, Worth & Dot Howard Foundation Scholarship

EXPERIENCE

ASU Robust Machine Learning, *Student Researcher* — April 2019 – Present
- Applied transformation-invariant constraints on adversarial training using Tensorflow to improve Convolutional Neural Network (CNN) performance
- Implemented 3 algorithms to reduce time for loss to converge for proposed methodology (up to 60% reduction)
- Designed and implemented optimization algorithms in Pytorch to fool a Deep RL agent in a realistic scenario

University of Central Florida's Competitive Programming Camp, *Student* — June 2017 – July 2017
- Learned about various competitive programming algorithms including Dijkstra's algorithm and Prim's algorithm
- Competed in 5+ programming competitions at the camp

ASU Signal, Information, Networks, and Energy Laboratory, *Student Researcher* — Sep 2017 – April 2018
- Created program to temporally and spatially interpolate power outputs of solar panels using Python libraries
- Analyzed patterns in cloud coverage and temperature to account for fluctuations in power output

LEADERSHIP ACTIVITIES

Hamilton Robotics Team, *Head of Electrical Team, Head of Communications* — Aug 2016 – May 2020
- Designed robot using Solidworks and used CNC router and mill to build precise parts
- Programmed autonomous, teleoperated, and vision code for robot using Java and FRC WPI Library

Mathworks Math Modeling Challenge, *Team Leader* — Jan 2019 – Feb 2020
- Developed and implemented mathematical models in Python to solve real-world problems
- Wrote a 15+ page research paper to report experimental designs and results

PERSONAL PROJECTS

HackOurCampus Hackathon — Aug 2020 – Sep 2020
- Developed iOS app that reminded students to bring both COVID-related and personal items
- Implemented Geofencing technologies to encourage social distancing and track when to send out reminders

National Honor Society App — July 2019 – Jan 2020
- Developed both the iOS and Android mobile application for school's NHS club
- Incorporated Google Firebase to create a personalized experience for users

CUSD Equity Symposium App — Nov 2018 – May 2020
- Developed iOS app for the Chandler school district's annual equity symposium
- Incorporated Google Firebase for a Login system and to store symposium information in a database

Skin Cancer Diagnosis using Neural Networks — Aug 2018 – April 2019
- Built CNNs and Generative Adversarial Networks in Keras + Tensorflow to improve computer diagnosis of skin cancer

HONORS AND AWARDS

- Association of Chinese American Physicians Bronze Prize (Nov 2019)
- Arizona Science and Engineering Fair 3rd place (April 2019)
- Arizona Science and Engineering Fair 3rd place (April 2016)
- Arizona Junior Science and Humanities Symposium 2nd place (April 2016)

SKILLS AND INTERESTS

Computing Skills: Java, Python, Keras, Swift, Pytorch, Tensorflow, Numpy, Matplotlib, Pandas, Git/Github, HTML5, CSS3, LaTeX, Matplotlib, Scikit-learn, SwiftUI

Miscellaneous Skills: Photoshop, Autodesk Inventor, Solidworks CAD, Welding, CNC Machine, Soldering, Milling

Interests: Photography, Tennis, Snowboarding, Adversarial Attacks in Machine Learning, Robotics, Airplanes